



An Energy Efficiency Workshop & Exposition

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Palm Springs, California

*Special Considerations for  
Energy Projects  
at Healthcare Facilities*

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## *Overview/Agenda*

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- Special Operational Characteristics
- Unique Environmental Conditions
- Implementing Energy Projects
- Opportunities for Savings
- Successful Energy Projects
- Questions



## *Special Operational Characteristics*

- ❑ 24 hour/365 days/year Facilities
- ❑ Multi-building Campus layout
- ❑ Multi-use Facilities: Office Buildings, Research facilities, “Traditional” Hospital facilities
- ❑ Overnight/Extended Stay facilities; Nursing Home Care



## *Unique Environmental Conditions*

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- Operating Areas - Air flow & Positive Pressure Requirements
- Equipment Cooling Needs  
    *er* MRI, Computers, etc.
- Medical Waste Handling & Disposal
- Patient Temperature/Humidity Requirements



## *Implementing Energy Projects*

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- Survey Requirements
  - er How/When to Take Measurements (Cannot get access to all places, all of the time)
- Approvals
  - er Multi-Decision Makers for Different Areas (Directors, Chiefs of Staff, Dept. Heads, Non Technical Stakeholders)



## *Implementing Energy Projects Continued*

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- Construction of Projects
  - er Critical operations
  - er After hour construction
  - er Patient/healthcare provider sensitivity
- Measurement & Verification
  - er Changes in use
  - er Coordination with other projects



## *Successful Energy Projects by Johnson Controls*

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- Dept. of Veterans Affairs Hospitals: Salt Lake City, San Francisco, Tucson
- Private Hospitals: Grady Health System, East Jefferson General Hospital, St. Joseph Medical Center-N.Y.
- University Hospitals: University of Wisconsin, Univ. of Texas Health



## *Department of Veteran's Affairs*

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- VA San Francisco - Replaced Boilers w/Thermal Fluid Heater Systems
- VA SLC - Replaced gas-fired incinerator w/Autoclave Technology
- VA Tucson - Replaced Traditional Steam Traps with new, "Orifice" Steam Traps





## *Opportunities for Savings*

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- ❑ Medical Waste Disposal
- ❑ Sterilizers
- ❑ Water & Irrigation
- ❑ Central Plants: Boilers & Chillers
- ❑ Other traditional opportunities: Lighting, Building Controls, HVAC improvements



## *VA-SLC Rotoclave*

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## *VA-SLC Flat Plate HX*



Refurbishment of Free Cooling to 350-Ton Capacity



## *VA-SLC Solar Recommission*

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# QUESTIONS ???